SCENA LED 80 FC

SCENA LED 80 PC FC

SCENA LED 80 FR FC

User's Manual rel. 1.0 **GB**

D.T.S. Illuminazione s.r.l. – ITALY
http://www.dts-lighting.it/

DTS
The Lighting Company

Made in Italy

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1- SYMBOLS

Graphic symbols used on this manual:

THIS SYMBOL INDICATES A HOT SURFACE

THIS SYMBOL INDICATES ELECTRIC SHOCK RISK

THIS SYMBOL INDICATES GENERAL RISK

THIS SYMBOL MEANS YOU CAN PLACE THE UNIT ON NORMALLY FLAMMABLE SURFACES

THIS SYMBOL INDICATES THE MINIMUM DISTANCE TO BE KEPT BETWEEN THE UNIT AND THE ILLUMINATED OBJECTS

THIS SYMBOL INDICATES THE EUROPEAN COMMUNITY DIRECTIVE 2002/96/EC ON WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT (WEEE)

2- GENERAL WARNING

Read the instruction contained in this user manual carefully, as they give important information regarding safety during installation , use and maintenance.
The device is not for domestic use and must be installed by a qualified electrician or experienced person.
Always disconnect the device from the mains before maintenance.
The device must always be equipped with an efficient ground connection.

3- GENERAL WARRANTY CONDITIONS

The unit is guaranteed for 36 months from the date of purchase against manufacturing material defects.

4- TECHNICAL FEATURES

OVERVIEW

SCENA LED 80 FC is a compact, lightweight, DMX-controlled LED projector equipped with an high-power Full Colour (RGBW) LED featuring 4 LED channels (Red / Green / Blue / White); 3660 Total Lumens.
The unit in available in two models: **SCENA LED 80 PC FC**, featuring a Ø 90 mm PC lens, and a long excursion 10°-76° linear zoom with high-efficiency optical system, enabling it to be used as a PC Beam or a very wide Wash (4245 Lux / 2 m).
SCENA LED 80 FR FC, featuring a Ø 112 mm Fresnel lens, and a long excursion 14°-77° linear zoom (3864 Lux / 2 m) with high-efficiency optical system.
SCENA LED 80 FC is a modern alternative to conventional lights, improving light quality, flexibility of use and installation, energy savings and component duration.
The fixture doesn't heat up and the projection is always flicker free.
The dimming curves are similar to those of halogen lamps.
The connectors are Powercon In/Out and 5 poles DMX In/Out.
SCENA LED 80 FC is contained in a strong housing with folded edges, designed to resist all the rigors of continuous use.
Also, the yoke has an exclusive round flange + clutch system which guarantees a perfect grip and safer operation.

PRODUCT CODES:

03.TS026.03.A	SCENA LED 80 FC *PC lens *White finishing
03.TS026.44.A	SCENA LED 80 FC *PC lens *Grey Silver finishing
03.TS026.46.A	SCENA LED 80 FC *PC lens *Black finishing
03.TS026.03.F	SCENA LED 80 FC *Fresnel lens *White finishing
03.TS026.44.F	SCENA LED 80 FC *Fresnel lens *Grey Silver finishing
03.TS026.46.F	SCENA LED 80 FC *Fresnel lens *Black finishing

LED Technology
1 x FULL RGBW LED; 3660 Lumens

Optical group
PC version (Ø 90 mm PC lens), 4245 Lux / 2 m, 10° - 76° linear zoom
FR version (Ø 112 mm Fresnel lens), 3864 Lux / 2 m, 14° - 77° linear zoom

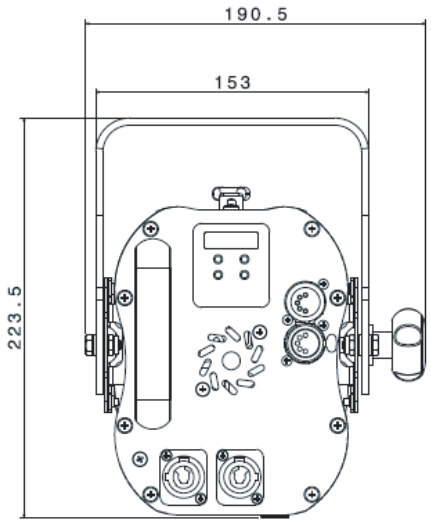
Control
10 DMX channels (Default)
4 digit 7 segments LED display + 4 soft keys

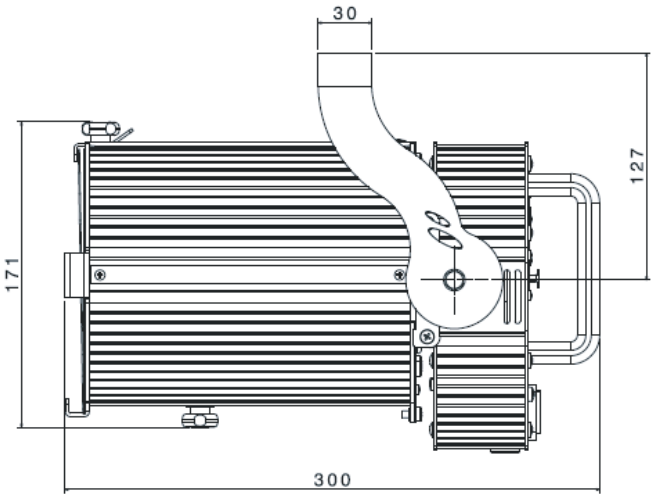
Connectors
Power supply: Powercon In & Out connectors
DMX: 5 poles In & Out connectors

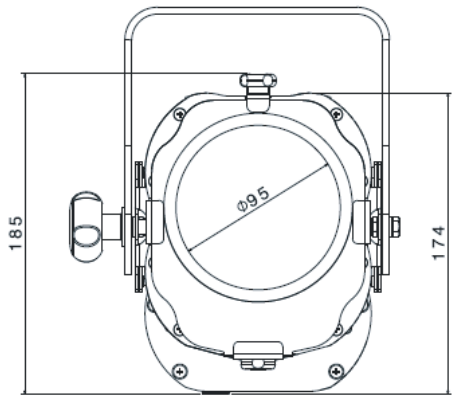
Power supply
Electronic full-range 90-260Vac , 50/60 Hz
Consumption: max 90W

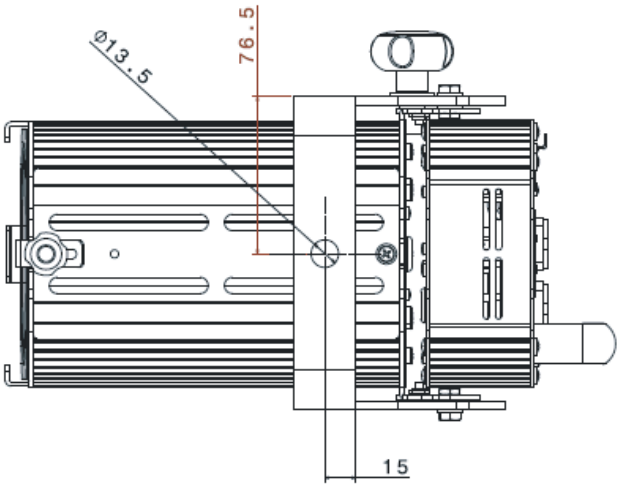
Weight
4 Kg (PC version)
3,7 Kg (FR version)

DIMENSIONS









5- ACCESSORIES

As standard

1 x User's Manual
1 x POWERCON male cable connector (D.T.S. Code 0520P014)
1 x XLR 5 pins male cable connector (D.T.S. Code 0508B028)
1 x XLR 5 pins female cable connector (D.T.S. Code 0508B027)
1 x Filterframe for SCENA COMPACT *Black finish (D.T.S. Code 02M00422.46)

Optional (on request)

- "C" Clamp G50 (Max. Load. 10 Kg) *Black finish (D.T.S. Code 0521A012)
- "C" Clamp G60 (Max. Load. 50 Kg) *Black finish (D.T.S. Code 0521A004)
- Barndoor for SCENA COMPACT *Black finish (D.T.S. Code 03.TA206)

6- IMPORTANT SAFETY INFORMATION

6.1 Fire prevention:

It is permissible to place the unit on normally flammable surfaces.

Suitable for mounting on normally flammable materials surfaces greater than 200°C with some combustion time lag.
Minimum distance from the closest illuminable surface: 30 cm.

Replace any blown or damaged fuses only with those of identical value (2AT).

6.2 Prevention from electric shock:

High voltage is present inside the unit.
Unplug the unit prior to performing any operation which involves touching the inside of the unit.
This equipment must be grounded, do not connect to non-grounded supplies.
The use of a thermal magnetic circuit breaker is recommended for each SCENA LED 80 FC unit. Use only AC supplies 90-260V , 50-60 Hz.
SCENA LED 80 FC should never be located in position exposed to rain or in areas of extreme humidity.
A good air ventilation is essential for proper equipment work.

6.3 Safety:

The external surface of the unit may exeed 50°C; never handle the unit until at least 5 minutes have elapsed since the unit was turned off.
Never install the unit in an enclosed area lacking sufficient air flow.
The ambient temperature should not exeed 40°C and should not be lower than -10°C.

6.4 Waste Electrical and Electronic Equipment (WEEE) directive:

The machine, accessories and packaging should be sorted for environmental-friendly recycling.
For EC countries: according to the European Directive 2002/96/EC for Waste Electrical and Electronic Equipment and its implementation into national right, luminaires that are no longer usable must be collected separately and disposed of in an environmentally correct manner.

7- INPUT / OUTPUT CONNECTIONS

DISPLAY PANEL

DMX INPUT
XLR 5 Pins Male Panel Connector

DMX OUTPUT
XLR 5 Pins Female Panel Connector

FUSE 2AT

MAINS AC INPUT 90-260V, 50/60 Hz

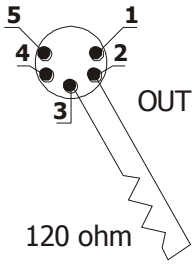
MAINS AC OUTPUT 90-260V, 50/60 Hz MAX 16A

8- DMX SIGNAL CONNECTION:

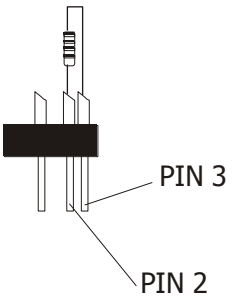
The unit operates using a digital DMX 512 signal.
Connection between the controller and the unit or between units must be carried out using a two pair screened ø 0.5 mm.
Ensure that the conductors do not touch each other.
Do not connect the cable ground to the DMX connector chassis.
The plug housing must be isolated. Connect the mixer signal to the DMX IN projector plug and connect it to the next projector by connecting the DMX OUT plug on the first unit to the DMX IN plug of the second one.
In this way, all the projectors are cascade connected.

If the display showing the DMX address flashes, then one of the following errors has occurred:
- DMX signal not present
- DMX reception problem

For Installations where long distance DMX cable connections are needed, we suggest to use a DMX terminator.
The DMX terminator is a male XLR 3-5 pins connector with a 120 ohm resistor Between pin 2 and 3.
The DMX terminator must be plugged into the last unit (DMX out panel connector) of the DMX line.



PLACE A 120 OHM RESISTOR BETWEEN PIN 2 AND 3 OF A MALE XRL CONNECTOR AND PLUG IT INTO THE DMX OUT PANEL CONNECTOR OF THE LAST UNIT CONNECTED TO THE DMX LINE



8.1 DMX addresses

SCENA LED 80 FC can be controlled with 10 DMX channels (Default).
In order to use the unit in 10 DMX channels mode, set the following addresses on the mixer:

Projector 1	A001	
Projector 2	A011	If you want to select the next projector, just add “10”
Projector 3	A021	
…..	A….	
projector 6	A051	

8.2 Selecting the DMX address

1) Press the UP-DOWN key until you reach the required DMX address. The numbers on the display will start to flash (but the new DMX address hasn't yet been set).
2) Press ENTER to confirm your selection. The numbers on the display will stop flashing and the projector is now controlled by the new DMX address.

TIPS: if you keep pushed the UP or DOWN keys, the channels are calculated more quickly and you get a faster selection.
2) Press ENTER to confirm your selection. The numbers on the display will stop flashing and the projector is now controlled by the new DMX address.

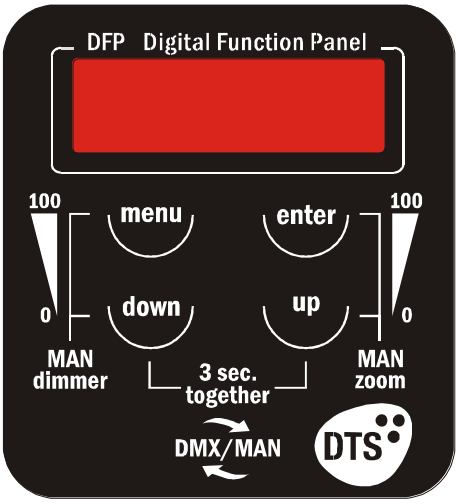
9- FIRMWARE UPDATING

To update the software version of the SCENA LED 80 FC you need:
- D.T.S. RED BOX interface (D.T.S. Code: 03.LA.008)
- USB-DMX Driver for the D.T.S. RED BOX interface
- “D.T.S. Firmware upgrade utility” program installed on PC
- Latest firmware release available for SCENA LED 80 FC unit

Updating the software version.
Please follow the procedure below to perform the update:

1. Install the D.T.S. RED BOX USB-DMX driver on the PC you will use to update the unit software.
2. Connect the D.T.S. RED BOX interface to the PC by using a USB cable.
3. Connect the D.T.S. RED BOX interface to the fixture by using a DMX cable.
4. Send the new software version into the unit by using “D.T.S. Firmware upgrade Utility” program.

10- DISPLAY FUNCTIONS



DISPLAY FUNCTIONS

The SCENA LED 80 FC display panel shows all the available functions.
Using these functions, it is possible to change some of the parameters and add some functions. Changing the D.T.S. setting can vary the functions of the unit so that it does not respond to the DMX 512 used to control it. Carefully follow the instructions below before carrying out any variations or selections.
NOTE: the symbol ☞ shows which key has to be pushed to obtain the desired function.

Software version 5.13

A001 (MENU) → disP (ENTER / Up-Down) → PoS1 (ENTER / Up-Down) → AA — Floor Position (ENTER)
PoS1 (ENTER / Up-Down) → bb — Suspended Position (ENTER)
disP (Up-Down) → Stby (ENTER / Up-Down) → oFF — Display Off (ENTER)
Stby (ENTER / Up-Down) → on — Display Always on (ENTER)

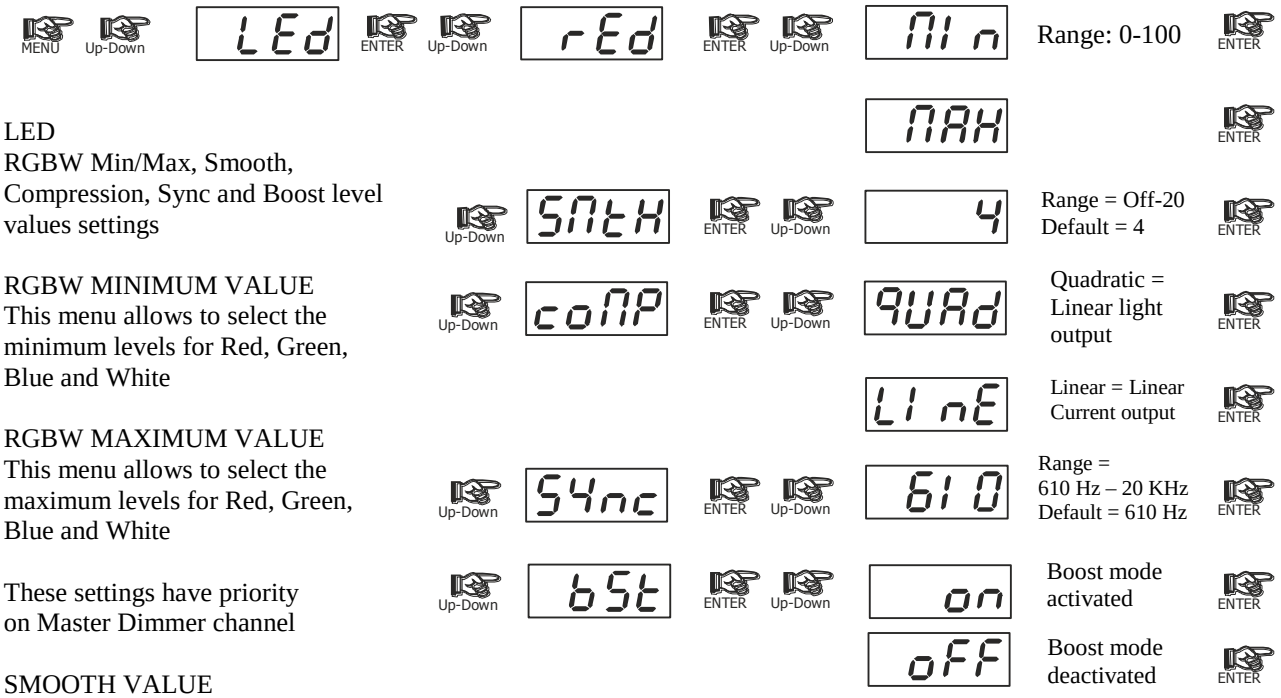
REVERSE DISPLAY
Reverses display's reading depending on the mounting position (on the ground or suspended).

DISPLAY STAND-BY
To turn off the display (after 5 seconds) Or leave it always on.

MODE (MENU / Up-Down) → 10cH (ENTER) — Default DMX Mode 10 Channels
MODE (ENTER / Up-Down) → 6cH (ENTER) — 6 DMX channels mode
15cH (ENTER) — 15 DMX channels mode
WALL (ENTER) — "WALL" (6 channels mode)
M4CH (ENTER) — "M4CH" (5 channels mode)
rGbA (ENTER) — "RGBA" (4 channels mode)
1cH (Up-Down / ENTER) → SUrE (ENTER) — 1 channel mode
MACr (Up-Down) → (ENTER / Up-Down) → Std (ENTER) — Standard mode enabled: (Default).
EHt (ENTER) — Extended mode enabled: Rainbow effects on MACRO channel.

DMX MODE
To select DMX mode: 10 DMX channels mode (default), 6 DMX channel mode, 15 DMX channels mode, "WALL" mode, "M4CH" mode, "RGBA" mode or 1 DMX channel mode.

MACRO
MACRO Function, enable channel mapping macro rainbow effects
STD (default)



LED
RGBW Min/Max, Smooth, Compression, Sync and Boost level values settings

RGBW MINIMUM VALUE
This menu allows to select the minimum levels for Red, Green, Blue and White

RGBW MAXIMUM VALUE
This menu allows to select the maximum levels for Red, Green, Blue and White

These settings have priority on Master Dimmer channel

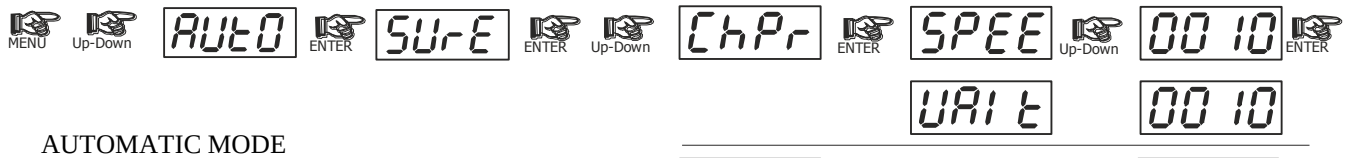
SMOOTH VALUE
This menu allows to select the value of the delay (in milliseconds) for Dimmer channel reaction to DMX or Program variation.
Off = 25 ms Instant response to DMX variation.
20 = 250 ms Smooth response to DMX variation.

COMPRESSION
This menu allows to select between Linear current output or Quadratic current output for LEDs
Default = Quadratic

SYNC
This menu allows to adjust the PWM frequency value (Hz) in order to reduce flickering in the process of your camera recordings

BOOST DRIVING
This menu allows to increase the LED's current from 350mA to 500mA

With BOOST active, the LED'S current is set to Max value. (30% more gain compared to BOOST Off)
Default = Disabled



AUTOMATIC MODE
Automatic demo game without DMX controller

ChPr
Chase with 16 steps previously created in REC MODE
Speed and Wait time selectable by user

CUPr
RGBW values selectable by user

Rainbow (rAIn)
Rainbow colours effect.
Speed time selectable by user

CU01-CU16
Color Macros as on DMX channel 9 (MACRO)

WHITE MACROS
16 macros for White color from 2800K to 6500K

DIMMER
Dimmer level selectable by user as on DMX channel 2 (DIMMER)
<u>Dimmer level is active for all the programs and macros</u>

SHUTTER
Shutter level selectable by user as on DMX channel 1 (SHUTTER)
<u>Shutter level is active only for CU01/CU16 and Wh01/Wh16 macros</u>

ESC
Esc from Automatic Mode Menu

REC MODE
In DMX Recorder Mode,it is possible to create and store the scenes of the ChPr by using an external DMX controller.
The unit must be set to 10 channels mode.

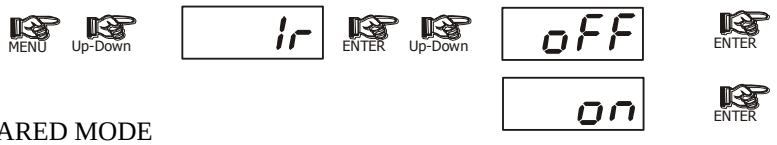
DMX Recorder Mode
For the programming of ChPr by using a DMX controller, besides the 10 channels necessary to control the unit a further 3 DMX channels are needed.
So that in RECORDER mode (via DMX) the unit will need 13 channels to be correctly programmed.
The three new DMX channels are:

DMX channel 11 = SCENES channel
From 0-10 = no function (r001)
From 11-255 are displayed the programmable scenes (max 16 scenes from M001 to M0016)

DMX channel 12 = EDIT channel:
-From 0-19 = no function
-From 20-234 the unit runs the configuration given by the received input DMX values.
With the channel SCENES it is possible to pass from one step to the next while with REC it is possible to record the selected scene.
-From 235-255 the unit runs the configuration given by the received input DMX values closing the sequence as last scene.
With the channel REC it is possible to record the selected scene as last scene.

DMX channel 13 = RECORDING channel
Records the set scene with a variation between 0 to 255 (the display flashes indicating that the scene has been recorded).It is advised that you keep the REC channel set to 0 and to run through the 255 only once you have decided to save the scene. If ChPr is not closed, by indicating the last scene (Edit channel between 235-255), in playback mode all 16 scenes will be played through even if not programmed

SLAVE MODE
Slave mode for ChPr program.
All slave units will be synchronised with master unit, running their own Chpr program.



Note:
External infrared remote sensor needed (D.T.S. Code: 03.LA.016)

INFRARED MODE
Infrared remote control.
By activating Ir Mode, it will be possible to navigate trought the unit functions by using the D.T.S. infrared remote control
(D.T.S. Code: 0514L008)

NOT IMPLEMENTED ON SCENA LED 80 FC

WIRELESS DMX

Wireless DMX enabled / disabled.
By activating WDMX MODE, it will be possible to control SCENA LED 80 FC via D.T.S. ANTENNA Wireless DMX Transmitter (cod. 03.E1271).
<u>Active only on SCENA LED 80 FC with Wireless on board</u>

UNLINK = LOG OUT

Logging on SCENA LED 80 FC (WIRELESS DMX must be enabled on SCENA LED 80 FC unit)

To log on the SCENA LED 80 FC in the WIRELESS system simply press and quickly release the function button on the transmitter.
The transmitter will start flashing rapidly red/green scanning for new free receivers / SCENA LED 80 FC units.
When a SCENA LED 80 FC logs on to the transmitter the LINK green light on transmitter starts to flash rapidly.
After approximately 10 seconds the transmitter will jump back to normal mode and continue transmitting data.
The SCENA LED 80 FC now try to synchronize to the transmitter.
When synchronized to the transmitter, 2 different modes are possible:
1. Antenna transmitter has detected and transmits a DMX signal, in this mode a solid green light is seen on the transmitter and solid display is seen on SCENA LED 80 FC.
2. No DMX signal connected, the Antenna transmitter will flash red/green; display blinking on SCENA LED 80 FC.

To log SCENA LED 80 FC off from a transmitter simply select UNLINK function UnLH under WIRELESS DMX MENU UdMH and press ENTER.
When SCENA LED 80 FC is logged off, the display is blinking, meaning its available for log in on a new transmitter.

Logging out a SCENA LED 80 FC

Select UNLINK function UnLH under WIRELESS DMX MENU UdMH and press ENTER.
When SCENA LED 80 FC is logged off the display is blinking, meaning its available for log in on a new transmitter.

Logging out all SCENA LED 80 FC units linked to a transmitter

Press and hold the function button of the transmitter for about 3 seconds. When the display is blinking on SCENA LED 80 FC, it mean that the units are logged out.

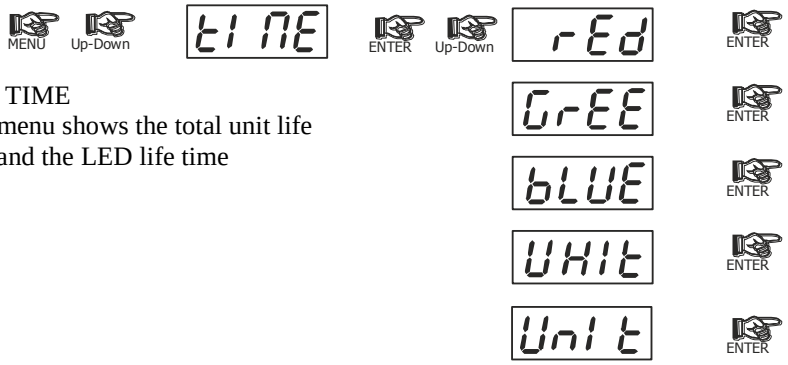
Transmitter, Status LED
Flashing red/green, no dmx connected.
Solid green, dmx signal detected and transmitted.
Fast flashing red/green, log in mode (every free SCENA LED 80 FC unit, not logged in to any other transmitter, will be logged on)

SCENA LED 80 FC Status
Display blinking = not logged on to a transmitter (free).
Solid display = logged on to a transmitter and receiving dmx data.

EMERGENCY
Emergency operating mode.
By setting Emergency mode, it will be possible to select Dimmer intensity level that will then ran if DMX signal is missing or not available.
Usefull for Emergency EXIT illumination on public areas.

DEFAULT SETTING
To restore default settings

TEMPERATURE
Internal unit temperature visualisation



LIFE TIME
This menu shows the total unit life time and the LED life time

SOFTWARE
Software version

11- DMX PROTOCOL

10 CHANNELS MODE (Default)

1 SHUTTER
2 DIMMER
3 RED
4 GREEN
5 BLUE
6 WHITE
7 WHITE PRE-PROGRAMMED
8 CTC
9 MACRO
10 FUNCTIONS

DMX CHANNEL	1	Parameter: **SHUTTER**

DMX range Value	Mid Point DMX value	Move Range (degrees)	Mode	Option	Function
000-009	**5**				**Black-out**
010-019	**14**				**Open**
020-029	**24**				**Black-out**
030-119					**Strobe at variable speed from slow to fast (3,27 s – 30 ms)**
120-149					**Pulse open at variable speed from slow to fast (42,6 s – 120 ms)**
150-179					**Pulse close at variable speed from slow to fast (42,6 s – 120 ms)**
180-204	**192**				**Random Strobe**
205-229	**218**				**Full Independent Random Strobe**
230-234					**Red, Yellow, Cyan and Blue colour effects at variable speed**
235-255	**245**				**Open**

DMX CHANNEL	2	Parameter: **DIMMER**

DMX range Value	Mid Point DMX value	Move Range (degrees)	Mode	Option	Function
000-255					**Proportional dimmer**

DMX CHANNEL	3	Parameter: **RED**

DMX range Value	Mid Point DMX value	Move Range (degrees)	Mode	Option	Function
000-255					**Proportional colour**

DMX CHANNEL	4	Parameter: **GREEN**

DMX range Value	Mid Point DMX value	Move Range (degrees)	Mode	Option	Function
000-255					**Proportional colour**

DMX CHANNEL	5	Parameter: **BLUE**

DMX range Value	Mid Point DMX value	Move Range (degrees)	Mode	Option	Function
000-255					**Proportional colour**

DMX CHANNEL	6	Parameter: **WHITE**

DMX range Value	Mid Point DMX value	Move Range (degrees)	Mode	Option	Function
000-255					**Proportional colour**

DMX CHANNEL	7	Parameter: **WHITE PRE-PROGRAMMED**

DMX range Value	Mid Point DMX value	Move Range (degrees)	Mode	Option	Function
000-055	**23**				**No Function**
056-105	**80**				**Full (Red-Green-Blue at Full)**
106-155	**130**				**White DTS**

IF CHANNEL 10 (FUNCTIONS) = CUSTOM WHITE RECALL (DMX range value 000-079)

156-205	**180**				**Custom White Recall**
206-255	**225**				**White CTC (Channel 8 CTC enabled 256 color temp. Correction Macros: 2800°K – 6500°K)**

IF CHANNEL 10 (FUNCTIONS) = CUSTOM WHITE CREATE (DMX range value 080-160)

156-205	**180**				**Custom White Create (RGB levels selectable by DMX)**
206-255	**225**				**White CTC (Channel 8 CTC enabled 256 color temp. Correction Macros: 2800°K – 6500°K)**

DMX CHANNEL	8	Parameter: **CTC (Colour Temperature Correction)**

DMX range Value	Mid Point DMX value	Move Range (degrees)	Mode	Option	Function

IF CHANNEL 7 (WHITE PRE-PROGRAMMED) = WHITE CTC (DMX range value 206-255)

000-255					**256 colour temp. Correction Macros: 0=2800°K / 128=4500°K / 255=6500°K**

IF CHANNEL 7 (WHITE PRE-PROGRAMMED) = NO FUNCTION (DMX range value 000-055)

000-255					**NO FUNCTION**

DMX CHANNEL	9	Parameter: **MACRO**

IF:

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DMX range Value	Mid Point DMX value	Move Range (degrees)	Mode	Option	Function
000-014					**No Function**
015-029					**Macro 1**
030-044					**Macro 2**
045-059					**Macro 3**
060-074					**Macro 4**
075-089					**Macro 5**
090-104					**Macro 6**
105-119					**Macro 7**
120-134					**Macro 8**
135-149					**Macro 9**
150-164					**Macro 10**
165-179					**Macro 11**
180-194					**Macro 12**
195-209					**Macro 13**
210-225					**Macro 14**
226-239					**Macro 15**
240-255					**Macro 16**

DMX CHANNEL	9	Parameter: **MACRO**

IF:

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DMX range Value	Mid Point DMX value	Move Range (degrees)	Mode	Option	Function
000-014					**No Function**
015-022					**Macro 1**
023-030					**Macro 2**
031-038					**Macro 3**
039-046					**Macro 4**
047-054					**Macro 5**
055-062					**Macro 6**
063-070					**Macro 7**
071-078					**Macro 8**
079-086					**Macro 9**
087-094					**Macro 10**
095-102					**Macro 11**
103-110					**Macro 12**
111-118					**Macro 13**
119-126					**Macro 14**
127-134					**Macro 15**
135-142					**Macro 16**
143-150					**Rainbow Speed 1 (1 Sec.)**
151-158					**Raibow Speed 2 (5 Sec.)**
159-166					**Rainbow Speed 3 (10 Sec.)**
167-174					**Rainbow Speed 4 (20 Sec.)**
175-182					**Rainbow Speed 5 (30 Sec.)**
183-190					**Rainbow Speed 6 (60 Sec.)**
191-198					**Rainbow Speed 7 (120 Sec.)**
199-206					**Rainbow Speed 8 (180 Sec.)**
207-214					**Random Speed 1 (0,5 Sec.)**
215-222					**Random Speed 2 (1 Sec.)**
223-230					**Random Speed 3 (2 Sec.)**
231-238					**Random Speed 4 (5 Sec.)**
239-246					**Random Speed 5 (10 Sec.)**
247-255					**Random Speed 6 (30 Sec.)**

DMX CHANNEL	10	Parameter: **FUNCTIONS (Recall, Create and Store the Custom white)**

DMX range Value	Mid Point DMX value	Move Range (degrees)	Mode	Option	Function
000-079					**Custom White Recall (Enable CH 7 for Custom white Recall)**
080-160					**Custom White Create (Enable CH 7 for Custom white Creation)**
161-255					**Custom White Store (Store the Custom White created)**

"WALL" 6 CHANNELS MODE
(For use with DTS Wall mounted DMX controller 0514L007)

1 GREEN
2 RED
3 BLUE
4 DIMMER
5 NOT USED
6 SHUTTER

DMX CHANNEL	1	Parameter: **GREEN**

DMX range Value	Mid Point DMX value	Move Range (degrees)	Mode	Option	Function
000-255					**Proportional colour**

DMX CHANNEL	2	Parameter: **RED**

DMX range Value	Mid Point DMX value	Move Range (degrees)	Mode	Option	Function
000-255					**Proportional colour**

DMX CHANNEL	3	Parameter: **BLUE**

DMX range Value	Mid Point DMX value	Move Range (degrees)	Mode	Option	Function
000-255					**Proportional colour**

DMX CHANNEL	4	Parameter: **DIMMER**

DMX range Value	Mid Point DMX value	Move Range (degrees)	Mode	Option	Function
000-255					**Proportional dimmer**

DMX CHANNEL	5	Parameter: **NOT USED**

DMX range Value	Mid Point DMX value	Move Range (degrees)	Mode	Option	Function
000-255					**No Function**

DMX CHANNEL	6	Parameter: **SHUTTER**

DMX range Value	Mid Point DMX value	Move Range (degrees)	Mode	Option	Function
000-009	**5**				**Black-out**
010-019	**14**				**Open**
020-029	**24**				**Black-out**
030-119					**Strobe at variable speed from slow to fast (3,27 s – 30 ms)**
120-149					**Pulse open at variable speed from slow to fast (42,6 s – 120 ms)**
150-179					**Pulse close at variable speed from slow to fast (42,6 s – 120 ms)**
180-204	**192**				**Random Strobe**
205-229	**218**				**Full Independent Random Strobe**
230-234					**Red, Yellow, Cyan and Blue colour effects at variable speed**
235-255	**245**				**Open**

"M4CH" 5 CHANNELS MODE

1 DIMMER
2 RED
3 GREEN
4 BLUE
5 WHITE

DMX CHANNEL	1	Parameter: **DIMMER**

DMX range Value	Mid Point DMX value	Move Range (degrees)	Mode	Option	Function
000-255					**Proportional dimmer**

DMX CHANNEL	2	Parameter: **RED**

DMX range Value	Mid Point DMX value	Move Range (degrees)	Mode	Option	Function
000-255					**Proportional colour**

DMX CHANNEL	3	Parameter: **GREEN**

DMX range Value	Mid Point DMX value	Move Range (degrees)	Mode	Option	Function
000-255					**Proportional colour**

DMX CHANNEL	4	Parameter: **BLUE**

DMX range Value	Mid Point DMX value	Move Range (degrees)	Mode	Option	Function
000-255					**Proportional colour**

DMX CHANNEL	5	Parameter: **WHITE**

DMX range Value	Mid Point DMX value	Move Range (degrees)	Mode	Option	Function
000-255					**Proportional colour**

4 CHANNELS MODE

1 RED
2 GREEN
3 BLUE
4 WHITE

DMX CHANNEL	1	Parameter: **RED**

DMX range Value	Mid Point DMX value	Move Range (degrees)	Mode	Option	Function
000-255					**Proportional colour**

DMX CHANNEL	2	Parameter: **GREEN**

DMX range Value	Mid Point DMX value	Move Range (degrees)	Mode	Option	Function
000-255					**Proportional colour**

DMX CHANNEL	3	Parameter: **BLUE**

DMX range Value	Mid Point DMX value	Move Range (degrees)	Mode	Option	Function
000-255					**Proportional colour**

DMX CHANNEL	4	Parameter: **WHITE**

DMX range Value	Mid Point DMX value	Move Range (degrees)	Mode	Option	Function
000-255					**Proportional colour**

1 CHANNEL MODE

1 DIMMER

DMX CHANNEL	1	Parameter: **DIMMER**

DMX range Value	Mid Point DMX value	Move Range (degrees)	Mode	Option	Function
000-255					**Proportional Dimmer**

15 CHANNELS MODE

1 SHUTTER
2 DIMMER
3 DIMMER FINE
4 RED
5 RED FINE
6 GREEN
7 GREEN FINE
8 BLUE
9 BLUE FINE
10 WHITE
11 WHITE FINE
12 WHITE PRE-PROGRAMMED
13 CTC
14 MACRO
15 FUNCTIONS

DMX CHANNEL	1	Parameter: **SHUTTER**

DMX range Value	Mid Point DMX value	Move Range (degrees)	Mode	Option	Function
000-009	**5**				**Black-out**
010-019	**14**				**Open**
020-029	**24**				**Black-out**
030-119					**Strobe at variable speed from slow to fast (3,27 s – 30 ms)**
120-149					**Pulse open at variable speed from slow to fast (42,6 s – 120 ms)**
150-179					**Pulse close at variable speed from slow to fast (42,6 s – 120 ms)**
180-204	**192**				**Random Strobe**
205-229	**218**				**Full Independent Random Strobe**
230-234					**Red, Yellow, Cyan and Blue colour effects at variable speed**
235-255	**245**				**Open**

DMX CHANNEL	2	Parameter: **DIMMER**

DMX range Value	Mid Point DMX value	Move Range (degrees)	Mode	Option	Function
000-255					**Proportional dimmer**

DMX CHANNEL	3	Parameter: **DIMMER FINE**

DMX range Value	Mid Point DMX value	Move Range (degrees)	Mode	Option	Function
000-255					**Proportional Dimmer**

DMX CHANNEL	4	Parameter: **RED**

DMX range Value	Mid Point DMX value	Move Range (degrees)	Mode	Option	Function
000-255					**Proportional colour**

DMX CHANNEL	5	Parameter: **RED FINE**

DMX range Value	Mid Point DMX value	Move Range (degrees)	Mode	Option	Function
000-255					**Proportional colour**

DMX CHANNEL	6	Parameter: **GREEN**

DMX range Value	Mid Point DMX value	Move Range (degrees)	Mode	Option	Function
000-255					**Proportional colour**

DMX CHANNEL	7	Parameter: **GREEN FINE**

DMX range Value	Mid Point DMX value	Move Range (degrees)	Mode	Option	Function
000-255					**Proportional colour**

DMX CHANNEL	8	Parameter: **BLUE**

DMX range Value	Mid Point DMX value	Move Range (degrees)	Mode	Option	Function
000-255					**Proportional colour**

DMX CHANNEL	9	Parameter: **BLUE FINE**

DMX range Value	Mid Point DMX value	Move Range (degrees)	Mode	Option	Function
000-255					**Proportional colour**

DMX CHANNEL	10	Parameter: **WHITE**

DMX range Value	Mid Point DMX value	Move Range (degrees)	Mode	Option	Function
000-255					**Proportional colour**

DMX CHANNEL	11	Parameter: **WHITE FINE**

DMX range Value	Mid Point DMX value	Move Range (degrees)	Mode	Option	Function
000-255					**Proportional colour**

DMX CHANNEL	12	Parameter: **WHITE PRE-PROGRAMMED**

DMX range Value	Mid Point DMX value	Move Range (degrees)	Mode	Option	Function
000-055	**23**				**No Function**
056-105	**80**				**Full (Red-Green-Blue at Full)**
106-155	**130**				**White DTS**

IF CHANNEL 15 (FUNCTIONS) = CUSTOM WHITE RECALL (DMX range value 000-079)

156-205	**180**				**Custom White Recall**
206-255	**225**				**White CTC (Channel 13 CTC enabled 256 color temp. Correction Macros: 2800°K – 6500°K)**

IF CHANNEL 15 (FUNCTIONS) = CUSTOM WHITE CREATE (DMX range value 080-160)

156-205	**180**				**Custom White Create (RGB levels selectable by DMX)**
206-255	**225**				**White CTC (Channel 13 CTC enabled 256 color temp. Correction Macros: 2800°K – 6500°K)**

DMX CHANNEL	13	Parameter: **CTC (Colour Temperature Correction)**

DMX range Value	Mid Point DMX value	Move Range (degrees)	Mode	Option	Function

IF CHANNEL 12 (WHITE PRE-PROGRAMMED) = WHITE CTC (DMX range value 206-255)

000-255					**256 colour temp. Correction Macros: 0=2800°K / 128=4500°K / 255=6500°K**

IF CHANNEL 12 (WHITE PRE-PROGRAMMED) = NO FUNCTION (DMX range value 000-043)

000-255					**NO FUNCTION**

DMX CHANNEL	14	Parameter: **MACRO**

IF:

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DMX range Value	Mid Point DMX value	Move Range (degrees)	Mode	Option	Function
000-014					**No Function**
015-029					**Macro 1**
030-044					**Macro 2**
045-059					**Macro 3**
060-074					**Macro 4**
075-089					**Macro 5**
090-104					**Macro 6**
105-119					**Macro 7**
120-134					**Macro 8**
135-149					**Macro 9**
150-164					**Macro 10**
165-179					**Macro 11**
180-194					**Macro 12**
195-209					**Macro 13**
210-225					**Macro 14**
226-239					**Macro 15**
240-255					**Macro 16**

DMX CHANNEL	14	Parameter: **MACRO**

IF:

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DMX range Value	Mid Point DMX value	Move Range (degrees)	Mode	Option	Function
000-014					**No Function**
015-022					**Macro 1**
023-030					**Macro 2**
031-038					**Macro 3**
039-046					**Macro 4**
047-054					**Macro 5**
055-062					**Macro 6**
063-070					**Macro 7**
071-078					**Macro 8**
079-086					**Macro 9**
087-094					**Macro 10**
095-102					**Macro 11**
103-110					**Macro 12**
111-118					**Macro 13**
119-126					**Macro 14**
127-134					**Macro 15**
135-142					**Macro 16**
143-150					**Rainbow Speed 1 (1 Sec.)**
151-158					**Raibow Speed 2 (5 Sec.)**
159-166					**Rainbow Speed 3 (10 Sec.)**
167-174					**Rainbow Speed 4 (20 Sec.)**
175-182					**Rainbow Speed 5 (30 Sec.)**
183-190					**Rainbow Speed 6 (60 Sec.)**
191-198					**Rainbow Speed 7 (120 Sec.)**
199-206					**Rainbow Speed 8 (180 Sec.)**
207-214					**Random Speed 1 (0,5 Sec.)**
215-222					**Random Speed 2 (1 Sec.)**
223-230					**Random Speed 3 (2 Sec.)**
231-238					**Random Speed 4 (5 Sec.)**
239-246					**Random Speed 5 (10 Sec.)**
247-255					**Random Speed 6 (30 Sec.)**

DMX CHANNEL	15	Parameter: **FUNCTIONS (Recall, Create and Store the Custom white)**

DMX range Value	Mid Point DMX value	Move Range (degrees)	Mode	Option	Function
000-079					**Custom White Recall (Enable CH 12 for Custom white Recall)**
080-160					**Custom White Create (Enable CH 12 for Custom white Creation)**
161-255					**Custom White Store (Store the Custom White created)**

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